SEQUENCE LISTING

<110> CHOO, Qui-Lim
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       WEINER, Amy

<120> METHODS AND REAGENTS FOR TREATING, PREVENTING AND DIAGNOSING
       BUNYAVIRUS INFECTION

<130> 21454

<140> US 10/580,050
<141> 2006-05-19

<150> PCT/US04/039333
<151> 2004-11-19

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<170> PatentIn version 3.3

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Pro Lys Lys Ile Val Gly Gly His Ile Asn Val Ile Glu Val Gly Asp
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Ile Gly Val Asp Lys Glu Thr Ala Gln Val Arg Leu Gln Thr Asp Thr
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His Met Ser Cys Val Arg Phe Leu His Arg Thr Ile Leu Pro Gly Ser
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Ala Lys Ala Ala Leu Ser Arg Lys Pro Glu Arg Lys Ala Asn Pro Lys
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Phe Gly Glu Trp Gln Val Glu Val Ile Asn Asn His Phe Pro Gly Asn
65                  70                  75                  80

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Phe Phe Pro Gly Thr Glu Met Phe Leu Glu Thr Phe Lys Phe Tyr Pro
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Leu Thr Ile Gly Ile His Arg Val Lys Gln Gly Met Met Asp Pro Gln
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Tyr Leu Lys Lys Ala Leu Arg Gln Arg Tyr Gly Thr Leu Thr Ala Asp
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Lys Trp Met Ser Gln Lys Val Ala Ala Ile Ala Lys Ser Leu Lys Asp
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aatatacaat gaaataactc cagtatgtgt agttaacgtt gcagaggtgg atggggacca    6000
acgtatattg ataagatctt tagactatct aaataatgat atattttctc tttcaaggat    6060
taaagtcggg cttgacgaat ttgcaacaat aaaaaaagca cactttagta aaatggtctc    6120
atttgaagga ccccaatta agacagggct cctcgacctt actgaattga tgaaatctca    6180
agatttgctt aaccttaatt atgataatat aaggaatagc aacttgatat cttttcaaa    6240
attgatttgc tgtgaggggt cagataatat aaatgatggg ttagagtttc tgtccgatga    6300
ccctatgaac tttacagagg gtgaagcaat acattcaaca ccgatcttta tatatatta    6360
ctcaaaaaga ggagaaagac atatgacata caggaatgca attaaattac tgatagaaag    6420
agaaactaag attttttgaag aagctttcac attcagtgag aatggcttca tatcgccaga    6480
gaatcttggt tgcttagaag cagtagtatc attaataaaa ttgttgaaaa ctaatgagtg    6540
gtccacagtt atagataaat gtattcatat atgtttaata aagaatggta tggatcacat    6600
gtaccattca tttgatgtcc ctaaatgttt tatggggaat cctatcacta gagacatgaa    6660
ttggatgatg tttagagaat tcatcaatag tttaccaggg acagatatac caccatggaa    6720
tgtcatgaca gagaacttca aaaagaaatg tattgctctg ataaactcta agttagaaac    6780
acagagagat ttctcagaat tcactaaact gatgaaaaag gaaggtggga ggagtaatat    6840
agaatttgat tagtagttat gagtttacag agaacctaca attaggctat aaatttggga    6900
gggttttgga aattggctaa aattcaaaaa gagggggatt aacagcaact gtataaattt    6960
gtagataggg gcacactact                                               6980
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<210> 6
<211> 2263
<212> PRT
<213> La Crosse virus

<400> 6
Met Asp Tyr Gln Glu Tyr Gln Gln Phe Leu Ala Arg Ile Asn Thr Ala
1   5   10   15

Arg Asp Ala Cys Val Ala Lys Asp Ile Asp Val Asp Leu Leu Met Ala
            20   25   30

Arg His Asp Tyr Phe Gly Arg Glu Leu Cys Lys Ser Leu Asn Ile Glu

```
                35                      40                      45

    Tyr Arg Asn Asp Val Pro Phe Val Asp Ile Ile Leu Asp Ile Arg Pro
        50              55              60

    Glu Val Asp Pro Leu Thr Ile Asp Ala Pro His Ile Thr Pro Asp Asn
    65              70              75              80

    Tyr Leu Tyr Ile Asn Asn Val Leu Tyr Ile Ile Asp Tyr Lys Val Ser
                85              90              95

    Val Ser Asn Glu Ser Ser Val Ile Thr Tyr Asp Lys Tyr Tyr Glu Leu
                100             105             110

    Thr Arg Asp Ile Ser Asp Arg Leu Ser Ile Pro Ile Glu Ile Val Ile
            115             120             125

    Val Arg Ile Asp Pro Val Ser Lys Asp Leu His Ile Asn Ser Asp Arg
        130             135             140

    Phe Lys Glu Leu Tyr Pro Thr Ile Val Val Asp Ile Asn Phe Asn Gln
    145             150             155             160

    Phe Phe Asp Leu Lys Gln Leu Leu Tyr Glu Lys Phe Gly Asp Asp Glu
                165             170               175

    Glu Phe Leu Leu Lys Val Ala His Gly Asp Phe Thr Leu Thr Ala Pro
                180             185             190

    Trp Cys Lys Thr Gly Cys Pro Glu Phe Trp Lys His Pro Ile Tyr Lys
            195             200             205

    Glu Phe Lys Met Ser Met Pro Val Pro Glu Arg Arg Leu Phe Glu Glu
        210             215             220

    Ser Val Lys Phe Asn Ala Tyr Glu Ser Glu Arg Trp Asn Thr Asn Leu
    225             230             235             240

    Val Lys Ile Arg Glu Tyr Thr Lys Lys Asp Tyr Ser Glu His Ile Ser
                245             250             255

    Lys Ser Ala Lys Asn Ile Phe Leu Ala Ser Gly Phe Tyr Lys Gln Pro
                260             265             270

    Asn Lys Asn Glu Ile Ser Glu Gly Trp Thr Leu Met Val Glu Arg Val
            275             280             285

    Gln Asp Gln Arg Glu Ile Ser Lys Ser Leu His Asp Gln Lys Pro Ser
        290             295             300

    Ile His Phe Ile Trp Gly Ala His Asn Pro Gly Asn Ser Asn Asn Ala
    305             310             315             320

    Thr Phe Lys Leu Ile Leu Leu Ser Lys Ser Leu Gln Ser Ile Lys Gly
                325             330             335
```

Ile Ser Thr Tyr Thr Glu Ala Phe Lys Ser Leu Gly Lys Met Met Asp
          340   345   350

Ile Gly Asp Lys Ala Ile Glu Tyr Glu Glu Phe Cys Met Ser Leu Lys
          355   360   365

Ser Lys Ala Arg Ser Ser Trp Lys Gln Ile Met Asn Lys Lys Leu Glu
370   375   380

Pro Lys Gln Ile Asn Asn Ala Leu Val Leu Trp Glu Gln Gln Phe Met
385   390   395   400

Val Asn Asn Asp Leu Ile Asp Lys Ser Glu Lys Leu Lys Leu Phe Lys
          405   410   415

Asn Phe Cys Gly Ile Gly Lys His Lys Gln Phe Lys Asn Lys Met Leu
          420   425   430

Glu Asp Leu Glu Val Ser Lys Pro Lys Ile Leu Asp Phe Asp Asp Ala
          435   440   445

Asn Met Tyr Leu Ala Ser Leu Thr Met Met Glu Gln Ser Lys Lys Ile
          450   455   460

Leu Ser Lys Ser Asn Gly Leu Lys Pro Asp Asn Phe Ile Leu Asn Glu
465   470   475   480

Phe Gly Ser Lys Ile Lys Asp Ala Asn Lys Glu Thr Tyr Asp Asn Met
          485   490   495

His Lys Ile Phe Glu Thr Arg Tyr Trp Gln Cys Ile Ser Asp Phe Ser
          500   505   510

Thr Leu Met Lys Asn Ile Leu Ser Val Ser Gln Tyr Asn Arg His Asn
          515   520   525

Thr Phe Arg Ile Ala Met Cys Ala Asn Asn Asn Val Phe Ala Ile Val
          530   535   540

Phe Pro Ser Ala Asp Ile Lys Thr Lys Lys Ala Thr Val Val Tyr Ser
545   550   555   560

Ile Ile Val Leu His Lys Glu Glu Glu Asn Ile Phe Asn Pro Gly Cys
          565   570   575

Leu His Gly Thr Phe Lys Cys Met Asn Gly Tyr Ile Ser Ile Ser Arg
          580   585   590

Ala Ile Arg Leu Asp Lys Glu Arg Cys Gln Arg Ile Val Ser Ser Pro
          595   600   605

Gly Leu Phe Leu Thr Thr Cys Leu Leu Phe Lys His Asp Asn Pro Thr
          610   615   620

Leu Val Met Ser Asp Ile Met Asn Phe Ser Ile Tyr Thr Ser Leu Ser
625   630   635   640

Ile Thr Lys Ser Val Leu Ser Leu Thr Glu Pro Ala Arg Tyr Met Ile
            645   650   655

Met Asn Ser Leu Ala Ile Ser Ser Asn Val Lys Asp Tyr Ile Ala Glu
            660   665   670

Lys Phe Ser Pro Tyr Thr Lys Thr Leu Phe Ser Val Tyr Met Thr Arg
        675   680   685

Leu Ile Lys Asn Ala Cys Phe Asp Ala Tyr Asp Gln Arg Gln Arg Val
    690   695   700

Gln Leu Arg Asp Ile Tyr Leu Ser Asp Tyr Asp Ile Thr Gln Lys Gly
705   710   715   720

Ile Lys Asp Asn Arg Glu Leu Thr Ser Ile Trp Phe Pro Gly Ser Val
            725   730   735

Thr Leu Lys Glu Tyr Leu Thr Gln Ile Tyr Leu Pro Phe Tyr Phe Asn
            740   745   750

Ala Lys Gly Leu His Glu Lys His His Val Met Val Asp Leu Ala Lys
        755   760   765

Thr Ile Leu Glu Ile Glu Cys Glu Gln Arg Glu Asn Ile Lys Glu Ile
    770   775   780

Trp Ser Thr Asn Cys Thr Lys Gln Thr Val Asn Leu Lys Ile Leu Ile
785   790   795   800

His Ser Leu Cys Lys Asn Leu Leu Ala Asp Thr Ser Arg His Asn His
            805   810   815

Leu Arg Asn Arg Ile Glu Asn Arg Asn Asn Phe Arg Arg Ser Ile Thr
        820   825   830

Thr Ile Ser Thr Phe Thr Ser Ser Lys Ser Cys Leu Lys Ile Gly Asp
        835   840   845

Phe Arg Lys Glu Lys Glu Leu Gln Ser Val Lys Gln Lys Lys Ile Leu
    850   855   860

Glu Val Gln Ser Arg Lys Met Arg Leu Ala Asn Pro Met Phe Val Thr
865   870   875   880

Asp Glu Gln Val Cys Leu Glu Val Gly His Cys Asn Tyr Glu Met Leu
            885   890   895

Arg Asn Ala Met Pro Asn Tyr Thr Asp Tyr Ile Ser Thr Lys Val Phe
        900   905   910

Asp Arg Leu Tyr Glu Leu Leu Asp Lys Gly Val Leu Thr Asp Lys Pro

```
              915              920              925

Val Ile Glu Gln Ile Met Asp Met Met Val Asp His Lys Lys Phe Tyr
    930              935              940

Phe Thr Phe Phe Asn Lys Gly Gln Lys Thr Ser Lys Asp Arg Glu Ile
945              950              955              960

Phe Val Gly Glu Tyr Glu Ala Lys Met Cys Met Tyr Ala Val Glu Arg
              965              970              975

Ile Ala Lys Glu Arg Cys Lys Leu Asn Pro Asp Glu Met Ile Ser Glu
         980              985              990

Pro Gly Asp Gly Lys Leu Lys Val  Leu Glu Gln Lys Ser  Glu Gln Glu
         995              1000             1005

Ile Arg  Phe Leu Val Glu Thr  Thr Arg Gln Lys Asn  Arg Glu Ile
    1010             1015             1020

Asp Glu  Ala Ile Glu Ala Leu  Ala Ala Glu Gly Tyr  Glu Ser Asn
    1025             1030             1035

Leu Glu  Lys Ile Glu Lys Leu  Ser Leu Gly Lys Ala  Lys Gly Leu
    1040             1045             1050

Lys Met  Glu Ile Asn Ala Asp  Met Ser Lys Trp Ser  Ala Gln Asp
    1055             1060             1065

Val Phe  Tyr Lys Tyr Phe Trp  Leu Ile Ala Leu Asp  Pro Ile Leu
    1070             1075             1080

Tyr Pro  Gln Glu Lys Glu Arg  Ile Leu Tyr Phe Met  Cys Asn Tyr
    1085             1090             1095

Met Asp  Lys Glu Leu Ile Leu  Pro Asp Glu Leu Leu  Phe Asn Leu
    1100             1105             1110

Leu Asp  Gln Lys Val Ala Tyr  Gln Asn Asp Ile Ile  Ala Thr Met
    1115             1120             1125

Thr Asn  Gln Leu Asn Ser Asn  Thr Val Leu Ile Lys  Arg Asn Trp
    1130             1135             1140

Leu Gln  Gly Asn Phe Asn Tyr  Thr Ser Ser Tyr Val  His Ser Cys
    1145             1150             1155

Ala Met  Ser Val Tyr Lys Glu  Ile Leu Lys Glu Ala  Ile Thr Leu
    1160             1165             1170

Leu Asp  Gly Ser Ile Leu Val  Asn Ser Leu Val His  Ser Asp Asp
    1175             1180             1185

Asn Gln  Thr Ser Ile Thr Ile  Val Gln Asp Lys Met  Glu Asn Asp
    1190             1195             1200
```

```
Lys Ile  Ile Asp Phe Ala Met  Lys Glu Phe Glu Arg  Ala Cys Leu
    1205              1210               1215

Thr Phe  Gly Cys Gln Ala Asn  Met Lys Lys Thr Tyr  Val Thr Asn
    1220              1225               1230

Cys Ile  Lys Glu Phe Val Ser  Leu Phe Asn Leu Tyr  Gly Glu Pro
    1235              1240               1245

Phe Ser  Ile Tyr Gly Arg Phe  Leu Leu Thr Ser Val  Gly Asp Cys
    1250              1255               1260

Ala Tyr  Ile Gly Pro Tyr Glu  Asp Leu Ala Ser Arg  Ile Ser Ser
    1265              1270               1275

Ala Gln  Thr Ala Ile Lys His  Gly Cys Pro Pro Ser  Leu Ala Trp
    1280              1285               1290

Val Ser  Ile Ala Ile Ser His  Trp Met Thr Ser Leu  Thr Tyr Asn
    1295              1300               1305

Met Leu  Pro Gly Gln Ser Asn  Asp Pro Ile Asp Tyr  Phe Pro Ala
    1310              1315               1320

Glu Asn  Arg Lys Asp Ile Pro  Ile Glu Leu Asn Gly  Val Leu Asp
    1325              1330               1335

Ala Pro  Leu Ser Met Ile Ser  Thr Val Gly Leu Glu  Ser Gly Asn
    1340              1345               1350

Leu Tyr  Phe Leu Ile Lys Leu  Leu Ser Lys Tyr Thr  Pro Val Met
    1355              1360               1365

Gln Lys  Arg Glu Ser Val Val  Asn Gln Ile Ala Glu  Val Lys Asn
    1370              1375               1380

Trp Lys  Val Glu Asp Leu Thr  Asp Asn Glu Ile Phe  Arg Leu Lys
    1385              1390               1395

Ile Leu  Arg Tyr Leu Val Leu  Asp Ala Glu Met Asp  Pro Ser Asp
    1400              1405               1410

Ile Met  Gly Glu Thr Ser Asp  Met Arg Gly Arg Ser  Ile Leu Thr
    1415              1420               1425

Pro Arg  Lys Phe Thr Thr Ala  Gly Ser Leu Arg Lys  Leu Tyr Ser
    1430              1435               1440

Phe Ser  Lys Tyr Gln Asp Arg  Leu Ser Ser Pro Gly  Gly Met Val
    1445              1450               1455

Glu Leu  Phe Thr Tyr Leu Leu  Glu Lys Pro Glu Leu  Leu Val Thr
    1460              1465               1470
```

```
Lys Gly  Glu Asp Met Lys Asp  Tyr Met Glu Ser Val  Ile Phe Arg
    1475             1480              1485

Tyr Asn  Ser Lys Arg Phe Lys  Glu Ser Leu Ser Ile  Gln Asn Pro
    1490             1495              1500

Ala Gln  Leu Phe Ile Glu Gln  Ile Leu Phe Ser His  Lys Pro Ile
    1505             1510              1515

Ile Asp  Phe Ser Gly Ile Arg  Asp Lys Tyr Ile Asn  Leu His Asp
    1520             1525              1530

Ser Arg  Ala Leu Glu Lys Glu  Pro Asp Ile Leu Gly  Lys Val Thr
    1535             1540              1545

Phe Thr  Glu Ala Tyr Arg Leu  Leu Met Arg Asp Leu  Ser Ser Leu
    1550             1555              1560

Glu Leu  Thr Asn Asp Asp Ile  Gln Val Ile Tyr Ser  Tyr Ile Ile
    1565             1570              1575

Leu Asn  Asp Pro Met Met Ile  Thr Ile Ala Asn Thr  His Ile Leu
    1580             1585              1590

Ser Ile  Tyr Gly Ser Pro Gln  Arg Arg Met Gly Met  Ser Cys Ser
    1595             1600              1605

Thr Met  Pro Glu Phe Arg Asn  Leu Lys Leu Ile His  His Ser Pro
    1610             1615              1620

Ala Leu  Val Leu Arg Ala Tyr  Ser Lys Asn Asn Pro  Asp Ile Gln
    1625             1630              1635

Gly Ala  Asp Pro Thr Glu Met  Ala Arg Asp Leu Val  His Leu Lys
    1640             1645              1650

Glu Phe  Val Glu Asn Thr Asn  Leu Glu Glu Lys Met  Lys Val Arg
    1655             1660              1665

Ile Ala  Ile Asn Glu Ala Glu  Lys Gly Gln Arg Asp  Ile Val Phe
    1670             1675              1680

Glu Leu  Lys Glu Met Thr Arg  Phe Tyr Gln Val Cys  Tyr Glu Tyr
    1685             1690              1695

Val Lys  Ser Thr Glu His Lys  Ile Lys Val Phe Ile  Leu Pro Thr
    1700             1705              1710

Lys Ser  Tyr Thr Thr Thr Asp  Phe Cys Ser Leu Met  Gln Gly Asn
    1715             1720              1725

Leu Ile  Lys Asp Lys Glu Trp  Tyr Thr Val His Tyr  Leu Lys Gln
    1730             1735              1740

Ile Leu  Ser Gly Gly His Lys  Ala Ile Met Gln His  Asn Ala Thr
```

```
        1745                    1750                    1755

Ser Glu  Gln Asn Ile Ala Phe  Glu Cys Phe Lys Leu  Ile Thr His
    1760                 1765                 1770

Phe Ala  Asp Ser Phe Ile Asp  Ser Leu Ser Arg Ser  Ala Phe Leu
    1775                 1780                 1785

Gln Leu  Ile Ile Asp Glu Phe  Ser Tyr Lys Asp Val  Lys Val Ser
    1790                 1795                 1800

Lys Leu  Tyr Asp Ile Ile Lys. Asn Gly Tyr Asn Arg  Thr Asp Phe
    1805                 1810                 1815

Ile Pro  Leu Leu Phe Arg Thr  Gly Asp Leu Arg Gln  Ala Asp Leu
    1820                 1825                 1830

Asp Lys  Tyr Asp Ala Met Lys  Ser His Glu Arg Val  Thr Trp Asn
    1835                 1840                 1845

Asp Trp  Gln Thr Ser Arg His  Leu Asp Met Gly Ser  Ile Asn Leu
    1850                 1855                 1860

Thr Ile  Thr Gly Tyr Asn Arg  Ser Ile Thr Ile Ile  Gly Glu Asp
    1865                 1870                 1875

Asn Lys  Leu Thr Tyr Ala Glu  Leu Cys Leu Thr Arg  Lys Thr Pro
    1880                 1885                 1890

Glu Asn  Ile Thr Ile Ser Gly  Arg Lys Leu Leu Gly  Ala Arg His
    1895                 1900                 1905

Gly Leu  Lys Phe Glu Asn Met  Ser Lys Ile Gln Thr  Tyr Pro Gly
    1910                 1915                 1920

Asn Tyr  Tyr Ile Thr Tyr Arg  Lys Lys Asp Arg His  Gln Phe Val
    1925                 1930                 1935

Tyr Gln  Ile His Ser His Glu  Ser Ile Thr Arg Arg  Asn Glu Glu
    1940                 1945                 1950

His Met  Ala Ile Arg Thr Arg  Ile Tyr Asn Glu Ile  Thr Pro Val
    1955                 1960                 1965

Cys Val  Val Asn Val Ala Glu  Val Asp Gly Asp Gln  Arg Ile Leu
    1970                 1975                 1980

Ile Arg  Ser Leu Asp Tyr Leu  Asn Asn Asp Ile Phe  Ser Leu Ser
    1985                 1990                 1995

Arg Ile  Lys Val Gly Leu Asp  Glu Phe Ala Thr Ile  Lys Lys Ala
    2000                 2005                 2010

His Phe  Ser Lys Met Val Ser  Phe Glu Gly Pro Pro  Ile Lys Thr
    2015                 2020                 2025
```

Gly Leu Leu Asp Leu Thr Glu Leu Met Lys Ser Gln Asp Leu Leu
    2030   2035   2040

Asn Leu Asn Tyr Asp Asn Ile Arg Asn Ser Asn Leu Ile Ser Phe
    2045   2050   2055

Ser Lys Leu Ile Cys Cys Glu Gly Ser Asp Asn Ile Asn Asp Gly
    2060   2065   2070

Leu Glu Phe Leu Ser Asp Asp Pro Met Asn Phe Thr Glu Gly Glu
    2075   2080   2085

Ala Ile His Ser Thr Pro Ile Phe Asn Ile Tyr Tyr Ser Lys Arg
    2090   2095   2100

Gly Glu Arg His Met Thr Tyr Arg Asn Ala Ile Lys Leu Leu Ile
    2105   2110   2115

Glu Arg Glu Thr Lys Ile Phe Glu Glu Ala Phe Thr Phe Ser Glu
    2120   2125   2130

Asn Gly Phe Ile Ser Pro Glu Asn Leu Gly Cys Leu Glu Ala Val
    2135   2140   2145

Val Ser Leu Ile Lys Leu Leu Lys Thr Asn Glu Trp Ser Thr Val
    2150   2155   2160

Ile Asp Lys Cys Ile His Ile Cys Leu Ile Lys Asn Gly Met Asp
    2165   2170   2175

His Met Tyr His Ser Phe Asp Val Pro Lys Cys Phe Met Gly Asn
    2180   2185   2190

Pro Ile Thr Arg Asp Met Asn Trp Met Met Phe Arg Glu Phe Ile
    2195   2200   2205

Asn Ser Leu Pro Gly Thr Asp Ile Pro Pro Trp Asn Val Met Thr
    2210   2215   2220

Glu Asn Phe Lys Lys Lys Cys Ile Ala Leu Ile Asn Ser Lys Leu
    2225   2230   2235

Glu Thr Gln Arg Asp Phe Ser Glu Phe Thr Lys Leu Met Lys Lys
    2240   2245   2250

Glu Gly Gly Arg Ser Asn Ile Glu Phe Asp
    2255   2260

<210> 7
<211> 25
<212> DNA
<213> Artificial Sequence

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<220>
<223>  Antisense primer derived from M segment of LACV genome

<400>  7
cgatcaacaa tccaatgata acaag                                          25


<210>  8
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Sense primer derived from M segment of LACV genome

<400>  8
tggaaatggc atcgagaata aa                                             22


<210>  9
<211>  39
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of LACV genome

<400>  9
attatctcac ctgtatcttg aattatgctg taagctggg                          39


<210>  10
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Sense primer derived from S segment of LACV genome

<400>  10
gtctcagcac gagttgatca gaa                                            23


<210>  11
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Antisense primer derived from S segment of LACV genome

<400>  11
aatggtcagc gggtagaatt tg                                             22
```

```
<210>  12
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  12
tggtgtagga tgggacagtg ggcca                                        25


<210>  13
<211>  21
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Sense primer derived from L segment of LACV genome

<400>  13
aaagtcgggc ttgacgaatt t                                            21


<210>  14
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Antisense primer derived from L segment of LACV genome

<400>  14
cggacagaaa ctctaacccca tca                                         23


<210>  15
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from L segment of LACV genome

<400>  15
cccccaatta agacagggct cctcg                                        25


<210>  16
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Synthetic oligonucleotide specific for LACV sequence
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<400> 16
catgaggcat tcaaattagg ttcta   25

<210> 17
<211> 174
<212> PRT
<213> La Crosse virus

<400> 17
Val Met Cys Lys Ser Lys Gly Pro Ala Ser Ile Leu Ser Ile Ile Thr
1   5   10   15

Ala Val Leu Val Leu Thr Phe Val Thr Pro Ile Asn Ser Met Val Leu
            20   25   30

Gly Glu Ser Lys Glu Thr Phe Glu Leu Glu Asp Leu Pro Asp Asp Met
        35   40   45

Leu Glu Met Ala Ser Arg Ile Asn Ser Tyr Tyr Leu Thr Cys Ile Leu
    50   55   60

Asn Tyr Ala Val Ser Trp Gly Leu Val Ile Ile Gly Leu Leu Ile Gly
65   70   75   80

Leu Leu Phe Lys Lys Tyr Gln His Arg Phe Leu Asn Val Tyr Ala Met
                85   90   95

Tyr Cys Glu Glu Cys Asp Met Tyr His Asp Lys Ser Gly Leu Lys Arg
            100   105   110

His Gly Asp Phe Thr Asn Lys Cys Arg Gln Cys Thr Cys Gly Gln Tyr
        115   120   125

Glu Asp Ala Ala Gly Leu Met Ala His Arg Lys Thr Tyr Asn Cys Leu
    130   135   140

Val Gln Tyr Lys Ala Lys Trp Met Met Asn Phe Leu Ile Ile Tyr Ile
145   150   155   160

Phe Leu Ile Leu Ile Lys Asp Ser Ala Ile Val Val Gln Ala
                165   170

<210> 18
<211> 968
<212> PRT
<213> La Crosse virus

<400> 18
Ala Gly Thr Asp Phe Thr Thr Cys Leu Glu Thr Glu Ser Ile Asn Trp
1   5   10   15

Asn Cys Thr Gly Pro Phe Leu Asn Leu Gly Asn Cys Gln Lys Gln Gln

```
                  20                        25                        30

Lys Lys Glu Pro Tyr Thr Asn Ile Ala Thr Gln Leu Lys Gly Leu Lys
        35                  40                  45

Ala Ile Ser Val Leu Asp Val Pro Ile Ile Thr Gly Ile Pro Asp Asp
        50                  55                  60

Ile Ala Gly Ala Leu Arg Tyr Ile Glu Glu Lys Glu Asp Phe His Val
65                  70                  75                  80

Gln Leu Thr Ile Glu Tyr Ala Met Leu Ser Lys Tyr Cys Asp Tyr Tyr
                85                  90                  95

Thr Gln Phe Ser Asp Asn Ser Gly Tyr Ser Gln Thr Thr Trp Arg Val
                100                 105                 110

Tyr Leu Arg Ser His Asp Phe Glu Ala Cys Ile Leu Tyr Pro Asn Gln
        115                 120                 125

His Phe Cys Arg Cys Val Lys Asn Gly Glu Lys Cys Ser Ser Ser Asn
        130                 135                 140

Trp Asp Phe Ala Asn Glu Met Lys Asp Tyr Tyr Ser Gly Lys Gln Thr
145                 150                 155                 160

Lys Phe Asp Lys Asp Leu Asn Leu Ala Leu Thr Ala Leu His His Ala
                165                 170                 175

Phe Arg Gly Thr Ser Ser Ala Tyr Ile Ala Thr Met Leu Ser Lys Lys
                180                 185                 190

Ser Asn Asp Asp Leu Ile Ala Tyr Thr Asn Lys Ile Lys Thr Lys Phe
        195                 200                 205

Pro Gly Asn Ala Leu Leu Lys Ala Ile Ile Asp Tyr Ile Ala Tyr Met
        210                 215                 220

Lys Ser Leu Pro Gly Met Ala Asn Phe Lys Tyr Asp Glu Phe Trp Asp
225                 230                 235                 240

Glu Leu Leu Tyr Lys Pro Asn Pro Ala Lys Ala Ser Asn Leu Ala Arg
                245                 250                 255

Gly Lys Glu Ser Ser Tyr Asn Phe Lys Leu Ala Ile Ser Ser Lys Ser
                260                 265                 270

Ile Lys Thr Cys Lys Asn Val Lys Asp Val Ala Cys Leu Ser Pro Arg
        275                 280                 285

Ser Gly Ala Ile Tyr Ala Ser Ile Ile Ala Cys Gly Glu Pro Asn Gly
        290                 295                 300

Pro Ser Val Tyr Arg Lys Pro Ser Gly Gly Val Phe Gln Ser Ser Thr
305                 310                 315                 320
```

```
Asp Arg Ser Ile Tyr Cys Leu Leu Asp Ser His Cys Leu Glu Glu Phe
                325             330             335

Glu Ala Ile Gly Gln Glu Glu Leu Asp Ala Val Lys Lys Ser Lys Cys
            340             345             350

Trp Glu Ile Glu Tyr Pro Asp Val Lys Leu Ile Gln Glu Gly Asp Gly
        355             360             365

Thr Lys Ser Cys Arg Met Lys Asp Ser Gly Asn Cys Asn Val Ala Thr
    370             375             380

Asn Arg Trp Pro Val Ile Gln Cys Glu Asn Asp Lys Phe Tyr Tyr Ser
385             390             395             400

Glu Leu Gln Lys Asp Tyr Asp Lys Ala Gln Asp Ile Gly His Tyr Cys
            405             410             415

Leu Ser Pro Gly Cys Thr Thr Val Arg Tyr Pro Ile Asn Pro Lys His
            420             425             430

Ile Ser Asn Cys Asn Trp Gln Val Ser Arg Ser Ser Ile Ala Lys Ile
        435             440             445

Asp Val His Asn Ile Glu Asp Ile Glu Gln Tyr Lys Lys Ala Ile Thr
    450             455             460

Gln Lys Leu Gln Thr Ser Leu Ser Leu Phe Lys Tyr Ala Lys Thr Lys
465             470             475             480

Asn Leu Pro His Ile Lys Pro Ile Tyr Lys Tyr Ile Thr Ile Glu Gly
            485             490             495

Thr Glu Thr Ala Glu Gly Ile Glu Ser Ala Tyr Ile Glu Ser Glu Val
        500             505             510

Pro Ala Leu Ala Gly Thr Ser Ile Gly Phe Lys Ile Asn Ser Lys Glu
        515             520             525

Gly Lys His Leu Leu Asp Val Ile Ala Tyr Val Lys Ser Ala Ser Tyr
    530             535             540

Ser Ser Val Tyr Thr Lys Leu Tyr Ser Thr Gly Pro Thr Ser Gly Ile
545             550             555             560

Asn Thr Lys His Asp Glu Leu Cys Thr Gly Pro Cys Pro Ala Asn Ile
            565             570             575

Asn His Gln Val Gly Trp Leu Thr Phe Ala Arg Glu Arg Thr Ser Ser
            580             585             590

Trp Gly Cys Glu Glu Phe Gly Cys Leu Ala Val Ser Asp Gly Cys Val
        595             600             605
```

Phe Gly Ser Cys Gln Asp Ile Ile Lys Glu Glu Leu Ser Val Tyr Arg
    610   615   620

Lys Glu Thr Glu Glu Val Thr Asp Val Glu Leu Cys Leu Thr Phe Ser
625   630   635   640

Asp Lys Thr Tyr Cys Thr Asn Leu Asn Pro Val Thr Pro Ile Ile Thr
          645   650   655

Asp Leu Phe Glu Val Gln Phe Lys Thr Val Glu Thr Tyr Ser Leu Pro
        660   665   670

Arg Ile Val Ala Val Gln Asn His Glu Ile Lys Ile Gly Gln Ile Asn
      675   680   685

Asp Leu Gly Val Tyr Ser Lys Gly Cys Gly Asn Val Gln Lys Val Asn
     690   695   700

Gly Thr Ile Tyr Gly Asn Gly Val Pro Arg Phe Asp Tyr Leu Cys His
705   710   715   720

Leu Ala Ser Arg Lys Glu Val Ile Val Arg Lys Cys Phe Asp Asn Asp
        725   730   735

Tyr Gln Ala Cys Lys Phe Leu Gln Ser Pro Ala Ser Tyr Arg Leu Glu
        740   745   750

Glu Asp Ser Gly Thr Val Thr Ile Ile Asp Tyr Lys Lys Ile Leu Gly
        755   760   765

Thr Ile Lys Met Lys Ala Ile Leu Gly Asp Val Lys Tyr Lys Thr Phe
     770   775   780

Ala Asp Ser Val Asp Ile Thr Ala Glu Gly Ser Cys Thr Gly Cys Ile
785   790   795   800

Asn Cys Phe Glu Asn Ile His Cys Glu Leu Thr Leu His Thr Thr Ile
        805   810   815

Glu Ala Ser Cys Pro Ile Lys Ser Ser Cys Thr Val Phe His Asp Arg
        820   825   830

Ile Leu Val Thr Pro Asn Glu His Lys Tyr Ala Leu Lys Met Val Cys
      835   840   845

Thr Glu Lys Pro Gly Asn Thr Leu Thr Ile Lys Val Cys Asn Thr Lys
     850   855   860

Val Glu Ala Ser Met Ala Leu Val Asp Ala Lys Pro Ile Ile Glu Leu
865   870   875   880

Ala Pro Val Asp Gln Thr Ala Tyr Ile Arg Glu Lys Asp Glu Arg Cys
        885   890   895

Lys Thr Trp Met Cys Arg Val Arg Asp Glu Gly Leu Gln Val Ile Leu

```
                    900                    905                    910
Glu Pro Phe Lys Asn Leu Phe Gly Ser Tyr Ile Gly Ile Phe Tyr Thr
        915                 920                 925
Phe Ile Ile Ser Ile Val Val Leu Leu Val Ile Ile Tyr Val Leu Leu
    930                 935                 940
Pro Ile Cys Phe Lys Leu Arg Asp Thr Leu Arg Lys His Glu Asp Ala
945                 950                 955                 960
Tyr Lys Arg Glu Met Lys Ile Arg
                965
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<210> 19
<211> 92
<212> PRT
<213> La Crosse virus

<400> 19
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Met Met Ser His Gln Gln Val Gln Met Asp Leu Ile Leu Met Gln Gly
1               5                   10                  15
Ile Trp Thr Ser Val Leu Lys Met Gln Asn Tyr Ser Thr Leu Leu Gln
            20                  25                  30
Leu Gly Ser Ser Ser Ser Met Pro Gln Arg Pro Arg Leu Leu Ser Arg
        35                  40                  45
Val Ser Gln Arg Gly Arg Leu Thr Leu Asn Leu Glu Ser Gly Arg Trp
    50                  55                  60
Arg Leu Ser Ile Ile Ile Phe Leu Glu Thr Gly Thr Thr Gln Leu Val
65                  70                  75                  80
Thr Thr Ile Leu Pro Ser Thr Asp Tyr Leu Gly Ile
                85                  90
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<210> 20
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from M segment of the LACV genome

<400> 20
ttgtacaagc tgctggaact gactt   25

<210> 21
<211> 22
<212> DNA

<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   21
tgtggtgccc gctatgatac tt   22

<210>   22
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   22
tgtggtgccc gctatgatac   20

<210>   23
<211>   21
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   23
ctgtggtgcc cgctatgata c   21

<210>   24
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   24
ctgtggtgcc cgctatgata   20

<210>   25
<211>   21
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   25
tctgtggtgc ccgctatgat a   21

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<210>  26
<211>  20
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from M segment of the LACV genome

<400>  26
tctgtggtgc ccgctatgat                                              20


<210>  27
<211>  20
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from M segment of the LACV genome

<400>  27
gtgtctgtgg tgcccgctat                                              20


<210>  28
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from M segment of the LACV genome

<400>  28
agacagtggc actgtgacca taa                                          23


<210>  29
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from M segment of the LACV genome

<400>  29
agacagtggc actgtgacca taat                                         24


<210>  30
<211>  23
<212>  DNA
<213>  Artificial Sequence
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<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   30
aagacagtgg cactgtgacc ata                                            23


<210>   31
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   31
aagacagtgg cactgtgacc ataa                                           24


<210>   32
<211>   25
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   32
aagacagtgg cactgtgacc ataat                                          25


<210>   33
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   33
gaagacagtg gcactgtgac cata                                           24


<210>   34
<211>   25
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from M segment of the LACV genome

<400>   34
agaagacagt ggcactgtga ccata                                          25
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<210>  35
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  35
ctgggccatt tttgaacctc gggaa                                        25


<210>  36
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  36
ctgggccatt tttgaacctc ggga                                         24


<210>  37
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  37
cactgggcca tttttgaacc tcgg                                         24


<210>  38
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  38
ctgggccatt tttgaacctc ggg                                          23


<210>  39
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome
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<400> 39
tgaacctcgg gaattgccaa aagca                                    25


<210> 40
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from M segment of the LACV genome

<400> 40
tgcactgggc catttttgaa cctcg                                    25


<210> 41
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from M segment of the LACV genome

<400> 41
actgggccat ttttgaacct cggga                                    25


<210> 42
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from M segment of the LACV genome

<400> 42
actgggccat ttttgaacct cggg                                     24


<210> 43
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from M segment of the LACV genome

<400> 43
tgggccattt ttgaacctcg gga                                      23


<210> 44
<211> 25
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<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  44
tgggccattt ttgaacctcg ggaat                                25


<210>  45
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  45
cactgggcca tttttgaacc tcggg                                25


<210>  46
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  46
tgggccattt ttgaacctcg ggaa                                 24


<210>  47
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  47
tgtgcaagtc gaaagggcct gca                                  23


<210>  48
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  48
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catgtgcaag tcgaaagggc ctgc                                    24.
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<210>   49
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from M segment of the LACV genome

<400>   49
tcatgtgcaa gtcgaaaggg cctg                                    24
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<210>   50
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from M segment of the LACV genome

<400>   50
atgtgcaagt cgaaagggcc tgca                                    24
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```
<210>   51
<211>   25
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from M segment of the LACV genome

<400>   51
tcatgtgcaa gtcgaaaggg cctgc                                   25
```

```
<210>   52
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from M segment of the LACV genome

<400>   52
taaccgcaga agggtcatgc accg                                    24
```

```
<210>   53
<211>   21
<212>   DNA
<213>   Artificial Sequence
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```
<220>
<223>  Probe derived from M segment of the LACV genome

<400>  53
ccgcagaagg gtcatgcacc g                                          21


<210>  54
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  54
aaccgcagaa gggtcatgca ccg                                        23


<210>  55
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  55
ataaccgcag aagggtcatg caccg                                      25


<210>  56
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  56
accgcagaag ggtcatgcac cg                                         22


<210>  57
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  57
cagaagggtc atgcaccggc tgt                                        23
```

```
<210>  58
<211>  21
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from M segment of the LACV genome

<400>  58
cgcagaaggg tcatgcaccg g                                                    21


<210>  59
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Reverse primer derived from M segment of the LACV genome

<400>  59
agtccctttta actgagttgc aatgt                                               25


<210>  60
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Reverse primer derived from M segment of the LACV genome

<400>  60
aaggttaaga ccagtaccgc agtaa                                                25


<210>  61
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Reverse primer derived from M segment of the LACV genome

<400>  61
gtgtgcaacg ttaattcgca at                                                   22


<210>  62
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
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<223> Reverse primer derived from M segment of the LACV genome

<400> 62
tgtggtgtgc aacgttaatt cg   22

<210> 63
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from M segment of the LACV genome

<400> 63
tcaattgtgg tgtgcaacgt ta   22

<210> 64
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from M segment of the LACV genome

<400> 64
tcaattgtgg tgtgcaacgt taa   23

<210> 65
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from M segment of the LACV genome

<400> 65
tcaattgtgg tgtgcaacgt t   21

<210> 66
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from M segment of the LACV genome

<400> 66
tcaattgtgg tgtgcaacgt taat   24

<210> 67

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<211>   23
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from the S segment of the LACV genome

<400>   67
tctcagcacg agttgatcag aac                                        23


<210>   68
<211>   23
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from the S segment of the LACV genome

<400>   68
ctcagcacga gttgatcaga aca                                        23


<210>   69
<211>   23
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from the S segment of the LACV genome

<400>   69
tcagcacgag ttgatcagaa caa                                        23


<210>   70
<211>   22
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from the S segment of the LACV genome

<400>   70
tctacccgct gaccattgga at                                         22


<210>   71
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Forward primer derived from the S segment of the LACV genome
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<400> 71
gagtgtgatg tcggatttgg tgtt   24

<210> 72
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 72
agtctcagca cgagttgatc agaa   24

<210> 73
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 73
gtctcagcac gagttgatca gaac   24

<210> 74
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 74
tctcagcacg agttgatcag aaca   24

<210> 75
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 75
ctcagcacga gttgatcaga acaa   24

<210> 76
<211> 22
<212> DNA

<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 76
tcagcacgag ttgatcagaa ca   22

<210> 77
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 77
tctacccgct gaccattgga a   21

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 78
tacccgctga ccattggaat tc   22

<210> 79
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 79
caagagtgtg atgtcggatt tggt   24

<210> 80
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 80
aagagtgtga tgtcggattt ggt   23

```
<210>  81
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from the S segment of the LACV genome

<400>  81
cctgatgcag ggtatatgga ctt                                              23


<210>  82
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from the S segment of the LACV genome

<400>  82
tgcagggtat atggacttct gtgt                                             24


<210>  83
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from the S segment of the LACV genome

<400>  83
gatgagtctc agcacgagtt gatc                                             24


<210>  84
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from the S segment of the LACV genome

<400>  84
gagtctcagc acgagttgat cagaa                                            25


<210>  85
<211>  25
<212>  DNA
<213>  Artificial Sequence
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<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 85
agtctcagca cgagttgatc agaac   25

<210> 86
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 86
tctacccgct gaccattgga   20

<210> 87
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 87
ctacccgctg accattggaa t   21

<210> 88
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 88
cgctgaccat tggaattcac a   21

<210> 89
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer derived from the S segment of the LACV genome

<400> 89
cctgatgcag ggtatatgga cttc   24

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<210>  90
<211>  25
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<213>  Artificial Sequence

<220>
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<400>  90
atgcagggta tatggacttc tgtgt                                          25


<210>  91
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  91
caagcaaggc atgatggacc ctcaa                                         25


<210>  92
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  92
tcaagcaagg catgatggac cctca                                          25


<210>  93
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  93
tgtcgcatca acaggtgcaa atgga                                          25


<210>  94
<211>  21
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome
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```
<400>   94
caatgccgca aaggccaagg c                                              21


<210>   95
<211>   23
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from S segment of LACV genome

<400>   95
atgccgcaaa ggccaaggct gct                                            23


<210>   96
<211>   22
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from S segment of LACV genome

<400>   96
ccgcaaaggc caaggctgct ct                                             22


<210>   97
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from S segment of LACV genome

<400>   97
ccgcaaaggc caaggctgct ctct                                           24


<210>   98
<211>   21
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from S segment of LACV genome

<400>   98
atgccgcaaa ggccaaggct g                                              21


<210>   99
<211>   21
```

```
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  99
tgccgcaaag gccaaggctg c                                          21


<210>  100
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  100
caatgccgca aaggccaagg ctg                                        23


<210>  101
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  101
aggccaaggc tgctctctcg cgta                                       24


<210>  102
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  102
cgcaaaggcc aaggctgctc tct                                        23


<210>  103
<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  103
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```
ccaaggctgc tctctcgcgt aagc                                          24
```

<210> 104
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 104
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caaaggccaa ggctgctctc tcgc                                          24
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<210> 105
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 105
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aggccaaggc tgctctctcg cg                                            22
```

<210> 106
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 106
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aaaggccaag gctgctctct cgcgt                                         25
```

<210> 107
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 107
```
cttcctcaat gccgcaaagg cca                                           23
```

<210> 108
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 108
tcttcctcaa tgccgcaaag gcc   23

<210> 109
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 109
aaggccaagg ctgctctctc gcgt   24

<210> 110
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 110
tcttcctcaa tgccgcaaag gcca   24

<210> 111
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 111
tcttcttcct caatgccgca aaggc   25

<210> 112
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 112
tcaatgccgc aaaggccaag gc   22

```
<210>   113
<211>   25
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Probe derived from S segment of LACV genome

<400>   113
ttcttcctca atgccgcaaa ggcca                                        25


<210>   114
<211>   23
<212>   DNA
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<220>
<223>   Probe derived from S segment of LACV genome

<400>   114
cctcaatgcc gcaaaggcca agg                                          23


<210>   115
<211>   25
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<220>
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<400>   115
cttcctcaat gccgcaaagg ccaag                                        25


<210>   116
<211>   24
<212>   DNA
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<220>
<223>   Probe derived from S segment of LACV genome

<400>   116
ttcttcctca atgccgcaaa ggcc                                         24


<210>   117
<211>   23
<212>   DNA
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<220>
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<223> Probe derived from S segment of LACV genome

<400> 117
ctcaatgccg caaaggccaa ggc   23

<210> 118
<211> 23
<212> DNA
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<220>
<223> Probe derived from S segment of LACV genome

<400> 118
ttcctcaatg ccgcaaaggc caa   23

<210> 119
<211> 23
<212> DNA
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<220>
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<400> 119
tcctcaatgc cgcaaaggcc aag   23

<210> 120
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<212> DNA
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<400> 120
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<210> 121
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<400> 121
tcaatgccgc aaaggccaag gct   23

<210> 122

<211> 22
<212> DNA
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<220>
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<400> 122
caatgccgca aaggccaagg ct   22

<210> 123
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<212> DNA
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<220>
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<400> 123
cttcttcctc aatgccgcaa aggcc   25

<210> 124
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<212> DNA
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<400> 124
ctcaatgccg caaaggccaa gg   22

<210> 125
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<400> 125
aatgccgcaa aggccaaggc tg   22

<210> 126
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atgccgcaaa ggccaaggct gc                                          22


<210>  127
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<400>  127
tgccgcaaag gccaaggctg                                             20


<210>  128
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<400>  128
ctcaatgccg caaaggccaa ggct                                        24


<210>  129
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<400>  129
cctcaatgcc gcaaaggcca ag                                          22


<210>  130
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<220>
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<400>  130
cttcctcaat gccgcaaagg ccaa                                        24


<210>  131
<211>  25
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<220>
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<400>   131
tcttcctcaa tgccgcaaag gccaa                                    25


<210>   132
<211>   22
<212>   DNA
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<220>
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<400>   132
tcctcaatgc cgcaaaggcc aa                                       22


<210>   133
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<212>   DNA
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<223>   Probe derived from S segment of LACV genome

<400>   133
ttcctcaatg ccgcaaaggc ca                                       22


<210>   134
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<220>
<223>   Probe derived from S segment of LACV genome

<400>   134
ttcctcaatg ccgcaaaggc caag                                     24


<210>   135
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<212>   DNA
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<220>
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<400>   135
aggccaaggc tgctctctcg cgt                                      23
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<210>  136
<211>  25
<212>  DNA
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<220>
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<400>  136
caaggctgct ctctcgcgta agcca                                      25


<210>  137
<211>  25
<212>  DNA
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<220>
<223>  Probe derived from S segment of LACV genome

<400>  137
ccaaggctgc tctctcgcgt aagcc                                      25


<210>  138
<211>  25
<212>  DNA
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<220>
<223>  Probe derived from S segment of LACV genome

<400>  138
aggccaaggc tgctctctcg cgtaa                                      25


<210>  139
<211>  21
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Probe derived from S segment of LACV genome

<400>  139
ccgcaaaggc caaggctgct c                                          21


<210>  140
<211>  25
<212>  DNA
<213>  Artificial Sequence
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<220>
<223>  Probe derived from S segment of LACV genome

<400>  140
aaggctgctc tctcgcgtaa gccag                                                25


<210>  141
<211>  24
<212>  DNA
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<220>
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<400>  141
aaggctgctc tctcgcgtaa gcca                                                 24


<210>  142
<211>  24
<212>  DNA
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<220>
<223>  Probe derived from S segment of LACV genome

<400>  142
caaggctgct ctctcgcgta agcc                                                 24


<210>  143
<211>  22
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<220>
<223>  Probe derived from S segment of LACV genome

<400>  143
cgcaaaggcc aaggctgctc tc                                                   22


<210>  144
<211>  23
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<400>  144
ccgcaaaggc caaggctgct ctc                                                  23
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<210> 145
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 145
aaggccaagg ctgctctctc gcgta   25

<210> 146
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 146
aaggccaagg ctgctctctc gcg   23

<210> 147
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 147
cgcaaaggcc aaggctgctc tctc   24

<210> 148
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe derived from S segment of LACV genome

<400> 148
aaaggccaag gctgctctct cgcg   24

<210> 149
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<212> DNA
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<220>
<223> Reverse primer derived from S segment of LACV genome

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<400>  149
caatggtcag cgggtagaat tt                                        22


<210>  150
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<212>  DNA
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<220>
<223>  Reverse primer derived from S segment of LACV genome

<400>  150
ccaatggtca gcgggtagaa tt                                        22


<210>  151
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Reverse primer derived from S segment of LACV genome

<400>  151
tccaatggtc agcgggtaga at                                        22


<210>  152
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Reverse primer derived from S segment of LACV genome

<400>  152
tccttcaggc tcttagcaat tgc                                       23


<210>  153
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Reverse primer derived from S segment of LACV genome

<400>  153
ctttgcggca ttgaggaaga ag                                        22


<210>  154
<211>  22
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<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 154
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<210> 155
<211> 21
<212> DNA
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<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 155
ccaatggtca gcgggtagaa t   21

<210> 156
<211> 21
<212> DNA
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<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 156
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<210> 157
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<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 157
tccaatggtc agcgggtaga   20

<210> 158
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 158

catccttcag gctcttagca attg   24

<210> 159
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 159
tgcggcattg aggaagaaga t   21

<210> 160
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 160
ttgcggcatt gaggaagaag   20

<210> 161
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 161
ctttgcggca ttgaggaaga a   21

<210> 162
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer derived from S segment of LACV genome

<400> 162
gccactctcc aaatttaggg ttag   24

<210> 163
<211> 23
<212> DNA
<213> Artificial Sequence

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<223>  Reverse primer derived from S segment of LACV genome

<400>  163
cacctgccac tctccaaatt tag                                          23


<210>  164
<211>  23
<212>  DNA
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<220>
<223>  Reverse primer derived from S segment of LACV genome

<400>  164
tcagcgggta gaatttgaaa gtt                                          23


<210>  165
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<212>  DNA
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<220>
<223>  Reverse primer derived from S segment of LACV genome

<400>  165
tggtcagcgg gtagaatttg aa                                           22


<210>  166
<211>  23
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<213>  Artificial Sequence

<220>
<223>  Reverse primer derived from S segment of LACV genome

<400>  166
atggtcagcg ggtagaattt gaa                                          23


<210>  167
<211>  23
<212>  DNA
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<220>
<223>  Reverse primer derived from S segment of LACV genome

<400>  167
aatggtcagc gggtagaatt tga                                          23
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<210>   168
<211>   23
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Reverse primer derived from S segment of LACV genome

<400>   168
caatggtcag cgggtagaat ttg                                        23


<210>   169
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Reverse primer derived from S segment of LACV genome

<400>   169
ccaatggtca gcgggtagaa                                            20


<210>   170
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Reverse primer derived from S segment of LACV genome

<400>   170
atccttcagg ctcttagcaa ttgc                                       24


<210>   171
<211>   24
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Reverse primer derived from S segment of LACV genome

<400>   171
tctacatcct tcaggctctt agca                                       24


<210>   172
<211>   23
<212>   DNA
<213>   Artificial Sequence

<220>
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<223>  Reverse primer derived from S segment of LACV genome

<400>  172
acctgccact ctccaaattt agg                                              23


<210>  173
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from L segment of LACV genome

<400>  173
taaagtcggg cttgacgaat tt                                               22


<210>  174
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from L segment of LACV genome

<400>  174
ttaaagtcgg gcttgacgaa tt                                               22


<210>  175
<211>  23
<212>  DNA
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<220>
<223>  Forward primer derived from L segment of LACV genome

<400>  175
ttaaagtcgg gcttgacgaa ttt                                              23


<210>  176
<211>  23
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from L segment of LACV genome

<400>  176
attaaagtcg ggcttgacga att                                             23


<210>  177
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<211>  24
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from L segment of LACV genome

<400>  177
attaaagtcg ggcttgacga attt                                      24


<210>  178
<211>  22
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from L segment of LACV genome

<400>  178
gattaaagtc gggcttgacg aa                                        22


<210>  179
<211>  23
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<213>  Artificial Sequence

<220>
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<400>  179
gattaaagtc gggcttgacg aat                                       23


<210>  180
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<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from L segment of LACV genome

<400>  180
gattaaagtc gggcttgacg aatt                                      24


<210>  181
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Forward primer derived from L segment of LACV genome
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<400>  181
gattaaagtc gggcttgacg aattt                                    25


<210>  182
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<400>  182
caaggattaa agtcgggctt ga                                       22


<210>  183
<211>  23
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<400>  183
caaggattaa agtcgggctt gac                                      23


<210>  184
<211>  23
<212>  DNA
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<400>  184
tcaaggatta aagtcgggct tga                                      23


<210>  185
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<400>  185
tcaaggatta aagtcgggct tgac                                     24


<210>  186
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<213> Artificial Sequence

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<400> 186
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<210> 187
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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<400> 187
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<210> 188
<211> 25
<212> DNA
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<400> 188
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<210> 189
<211> 24
<212> DNA
<213> Artificial Sequence

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<223> Reverse primer derived from L segment of LACV genome

<400> 189
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<210> 190
<211> 25
<212> DNA
<213> Artificial Sequence

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<400> 190
tcggacagaa actctaaccc atcat   25

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<210>  191
<211>  25
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Reverse primer derived from L segment of LACV genome

<400>  191
atcggacaga aactctaacc catca                                              25
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